

Scrofula

laurencia

Charles

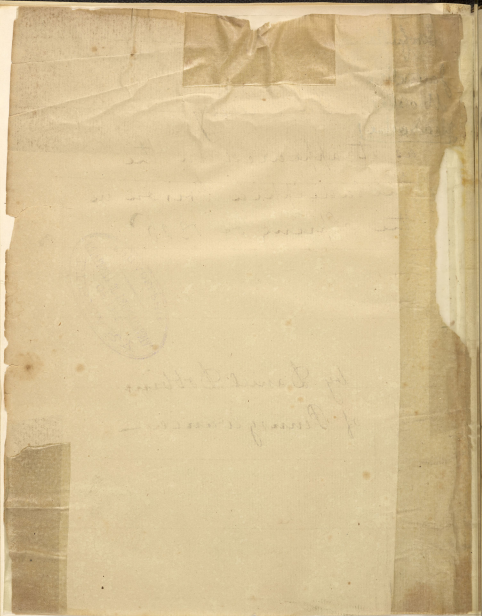
and others

On Scirvy

as it appeared in the
Philadelphia Prison in
the Spring of 1806



by Daniel Dobbin
of Pennsylvania —



I shall first notice some circumstances relative to the internal economy of the Prison, before I proceed to an account of the disease.

A strict attention to cleanliness is enjoined by the rules of the House; the Prison is cleansed out and white washed at least once a month - The clothing of the prisoners is changed regularly once a week.

About fifteen or twenty are confined in a room, they are kept comfortably warm with clothes and fire during the winter, and in the summer the windows are opened to admit fresh air.

The prisoners are locked up every evening at dark, and continue in their rooms till sunrise the next morning -

Their diet consists of three fourths of a pound of Rye bread, well fermented.

1841
The first of the season
was on the 1st of March
and was a very fine day
with a light breeze from
the west and a few clouds
in the sky. The temperature
was about 40 degrees
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and pleasant. The sea
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was clear. The fish
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and baked, with ² half a gill of Melafes
diluted with a pint of water; for break-
fast - For dinner they have half a
pound of rye bread with half a pound
of fresh meat and beans or peas, or a
soup made of these ingredients, or with
rice - At supper they have Indian mush
with Melafes and water in the same
proportion as for breakfast - In former
years they were allowed potatoes or
turnips, or some fresh vegetables for
dinner; but the extreme scarcity of
these articles during the spring of 1806
and the preceding winter, precluded
the possibility of furnishing them as
articles of diet for the prison - I wish
this circumstance attended to, as it
explains the appearance of the disease

at this time - I should mention that particular attention is paid by the Inspectors and Keepers of the prison to obtain provisions of a good quality

The scurvy made its appearance about the first of May - The first case was in a negro whose breast was affected, he had considerable pain with a difficulty of breathing, which were increased by exercise - From an ignorance of the disease these symptoms were attributed to an effusion of water into the cavity of the Thorax - This prognosis led to Bleet - Olisters and diuretics - Great debility succeeded this practice, which could not be removed by a cordial and tonic plan which was next pursued - This case terminated fatally - Another person who was treated in nearly the same way presented a

similar result - ⁴ The ulceration of the
gums was not attended to. It was suppo-
sed a casual circumstance, that had
no connection with the general complaint
A third person whose legs were affected
with pain and tumefaction was put
on the use of Calomel in form of pulv.
Antimoniale, and afterwards in com-
bination with ginecicum - This case
had like to have terminated in the
same way - fortunately the Mercury
was omitted before a salivation was
produced - A tonic plan was next pur-
sued without success - This succession
of disappointments, led to a more atten-
tive examination of every symptom.
It now appeared evident that the
disease was scurvy - This suggested an
alteration in the plan of treatment
the result of which was highly pleasing
as we did not lose another patient

The sick were immediately put on the use of a vegetable diet, and the bitric acid; and fresh vegetables were ordered for the prisoners generally - An immediate change now took place, the recoveries were rapid and no new cases occurred - As vegetation had not advanced far, it was difficult to procure sallads for the whole prison; and now that the disease had ceased their use was discontinued - The Survey in a short time returned - the course was again had to the ~~vegetables~~ with the effect of again banishing the disease - This diet could now be continued, and the prison remained healthy

When disease occurs we are naturally led to investigate the cause in order to effect a cure, and more effectually prevent a return - It will be proper that I should consider the different

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the different causes assigned by authors in order to ascertain whether they existed in the prison, and what agency each had in the production of this disease

Dr Beddoes considers a deficiency of oxygen as the sole cause of Scurvy - He says
"The livid colour of the blood, and the large lived spots which are so often spread over the surface of the body left little room to doubt of the absence of oxygen; and the recovery of the sick by means of acids, and by a vegetable diet, afford a sort of confirmation similar to that which is derived from chemical synthesis, for no substances are better calculated, than acids at least, to impart oxygen to the system; they contain it in abundance, and they part with it easily."

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If this theory were correct all substances
that contain oxygen, should cure the
disease and they should do it in pro-
portion to the readiness with which
they part with their oxygen - The
sulphuric and nitric acids should be
the very best remedies - But repeated
experience has proven that they will
not cure a case - This I esteem a
sufficient reason for laying their
use aside, without accounting for
their failure as Dr Beddoes would
wish - Another fact that opposes this
theory is that cures have been effec-
ted without administering acids
and without increasing the quantity
of oxygen - But it will be sufficient
for my purpose to shew that a defici-
ency of oxygen in the present case
could not be suspected

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The prisoners are confined only twelve hours in the twenty four. They are employed at work through the day in the open air - Their rooms are large and ventilated - If the disease was induced by a deficiency of oxygen - it should have constantly appeared in those who were confined in the dungeon, where the atmosphere is unchanged, and only sufficient to support the combustion of a lighted taper - A number were confined in this place, not one of whom had survived - They were chiefly vagrants who had not been a long time in Prison

That Miasma had no share in the production of this complaint I infer from the diseases that preceded

the friends are confined only to
down on the south form Chapin
complex in at look through the day
in the open air. Their rooms are
large ones, and that of the
room is reached by a descending of 10
from the stairs. There is a small
room in the room with some
in the room open where the stairs
down is reached by a descending of 10
it is difficult to see the stairs of a
lighter color. In the room
there is in this place, but not in the
room. They are sleeping in
points into the room and down the
time in the room.
That the room has no stairs in the
in the room of this room.
in the room the stairs that are

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and accompanied it; they were catarrhs and other complaints that originate from the sensible qualities of the atmosphere — The cleanliness of the prison forbids us to attribute it to this cause

Cold alone and in combination with moisture — They act I suppose as predisposing causes — by inducing debility — That the disease can exist without them is proven by its occurrence in the tropical climates, and that it was not the cause in this case is evident from the season of the year in which it occurred. The prisoners are comfortably clad so as to be protected from the inclemency of the weather, if such had existed

I did not in one case perceive that
 hard labour induced scurvy - This ac-
 cords with the observation of DoBlane.
 He thinks it has an opposite effect
 He says "a fact mentioned by Capt
 Cook may be alleged in favour
 of this, He remarks that the Kemscha-
 deles, who were habituated to hard
 labour were free from scurvy, while
 the Russians and Bofacks who were
 in Garrison in their country and
 led indolent lives, were frequently
 affected, though they used nearly the
 same sort of diet"

Food of an indigestible quality and
 containing little nutriment. It may
 admit of a doubt whether too much
 has not been attributed to this cause
 and the circumstance of its being

recent left out of view. In the present case the food is of sufficient easy digestion for labourers. The nourishment it contains has always maintained the prisoners vigorous and capable of performing hard labour. A reason for rejecting this as a cause is that the disease was cured and prevented from returning without increasing the quantity of nourishment, merely by a change in the quality by substituting green vegetables instead of beans peas and rice.

I shall now mention the causes to which the production of this disease is attributed. They are

Debility induced by disease. From the convalescent room there was a number of obstinate cases.

Fear grief and other debilitating passions

They have been observed strongly to dispose to this disease, it attacks the discontented and refining, while those of cheerful dispositions escape. This is the only explanation I could collect for the ^{more} frequent appearance among those confined for trial. The fact has been frequently observed that seamen newly impressed are particularly liable to become scorbutic.

A diet consisting of animal food or the dry farinaceous vegetables, this I suspect to be a more frequent cause than has been supposed, because it exists in almost every instance where the disease has appeared.

Lind in his excellent book on Scurvy speaking of its causes in seamen says

"I come in the next place to an additional and extremely powerful cause observed at sea to occasion this disease

and which concurring with the former in progress of time seldom fails to produce it - and this is the want of fresh vegetables and greens, either as may be supposed to counteract the bad effects of their before mentioned situation, or rather and more truly to correct the quality of their hard and dry food. Experience indeed shows, that as greens and fresh vegetables with ripe fruits are the best remedies for it, so they prove the most effectual preservatives against it, and the difficulty of obtaining them at sea, together with a long continuance in the moist sea air are the true cause of its so general and fatal malignity on that element." This quotation shows the opinion of one whose experience in this

disease was very ample - Altho' he considers cold as the most frequent cause yet a want of recent vegetable matter will seldom fail to induce it.

That a diet such as is used by the prisoners will give rise to scurvy, appears from the following facts - Dr Polme seen it prevail in a prison ship where the diet consisted of fresh animal food and peas - Dr Lind relates the cases of two persons who lived on bread ~~on bread~~, dried and salted fish and sometimes salt beef

An interesting case is published by Dr Wistar in the 2 Voll. of the Philadelphia Medical and Physical Journal. The subject of this paper had been confined for some time to a Diet of

There are many simple letters in
the code on the most frequent
at a count of several vegetables
in the code in fact to make it
that a short word as a word of the
as soon as you are to receive off
over the following facts - to follow
then it presents a picture of the
the next variation of front and back
and from the first relation the code
it is then a very simple one
the code, which was the first and
the code was very deep
the interesting case is finished by
the letter in the 2nd of the letters
the letter the code was a typical form
the subject of this paper has been
and for some time is a list of

rice, chocolate, bread & butter with a small quantity of animal food. Under these restrictions scurvy occurred, when there could be no suspicion of any other cause than a want of recent vegetable aliment—

I have already stated that the prisoners had lived between three and four months on animal food and dry farinaceous vegetables. It is probable that a very slight alteration in the diet would have prevented the appearance of scurvy at this time. Altho potatoes or turnips are not adapted to the cure of this disease, yet they might prevent its occurrence, for it is more easy to avoid evil, than cure it when present.

The uniformity of the prisoners diet

the character of the work
all quantity of work
and satisfaction being secured
it would be no surprise if any
other cause than a lack of
material abundance
had been shown that the firm
has less business than
in months an unusual
my former own capital
should that a very slight
in the best would have
the appearance of money
little factor is enough
to the case of this
current its
and to avoid
the

should be kept in view - Dr Lind remarks that the causes must not only subvert conjointly, and exert their influence together in a high degree, but must act likewise together for a considerable time, without interruption especially the diet - Change of food has not only a most surprising effect to recover from a very deplorable state of the scurvy, but even the smallest alteration of diet has a wonderful influence in preventing the approach of it

We see the effect of such a diet in the cases already cited; it is reasonable to assign this as the cause in the present case. If we should suspect any other why did it not appear before? There never has been even a solitary case of scurvy in the Prison except in the

Spring of 1800 - besides I am not acquainted with any peculiarity that could have induced the disease, that had an existence at this time except the diet

I esteem the following fact of considerable importance - A person had scurvy who had not been confined in the prison for near two months - Now if miasma or a deficiency of oxygen had been the cause this could not have happened. Those who were just imprisoned, and who a few days before had lived on vegetables, would have been as liable to the disease as the oldest prisoner. Particular attention was paid to this circumstance, and it was thought at the time to throw considerable light on the cause of the malady -

A circumstance that I formerly mentioned puts the matter beyond a doubt that we must refer the origin of the disease to this cause - a liberal use of vegetables removed the complaint - They were omitted for a reason I have already mentioned - In a short time the Scurvy returned - recourse was again had to a vegetable diet with the effect of again quickly banishing the disease, and by persisting in this the prison remained healthy

I suspect that the different causes of Scurvy assigned by authors as cold with moisture &c act as predisposing by inducing debility, and that a want of recent vegetable aliment is alone the true remote cause, or the

...the first the matter before a court that
...most refer the origin of the disease
to this cause - a liberal use of medicine
is necessary to the completion of the
...omitted for a reason I have
...of the disease - a short time
...of the disease - recovery is
...lead to a fatal result with
...effect of a good quality of food
...the disease and by preventing its return
...the first or second case is the
...of the fact that the different cases of
...the disease are the result of a
...the disease is not a fatal one
...the disease is not a fatal one
...the disease is not a fatal one

line qua non - This opinion derives weight from the circumstance that scurvy never exists when this cause is not present - The different predisposing causes acting with various force will produce the disease under circumstances very dissimilar

Backstrom who wrote in 1734 was of this opinion "He says other causes may concur, but recent vegetables are alone found effectual to preserve the body free from this malady" He details a number of cases where the disease existed under these circumstances, and was always removed when this cause ceased to exist

I shall say a few words on the symptoms and cure

The first symptom that presents itself is a change of the natural colour of the face to a pale yellow or dingy appearance - altho this is not observed in every case to precede other symptoms yet it is constant and invariable.

The countenance has a sullen and morose appearance. From this circumstance probably arose the opinion held by the ancients, that Scurvy was merely a higher grade of Melancholia.

There is early observed, a languor and aversion to motion, which soon degenerates into a troublesome lassitude - a pain is felt in the muscles and bones and the least motion fatigues, with this peculiarity that no refreshment is obtained from sleep.

Their gums soon become itchy, swell and bleed by the slightest friction. They are livid spongy and fungus.

The skin was not increased in temperature, it felt dry and rough presenting an urticine appearance. Spots of a dark colour were very numerous. These were different from the large blotches or ecchy-moses that appeared chiefly on the lower extremities.

A number had swelled legs this in some was similar to edema while in others it was so hard that it would to no pressure. The flexor muscles of the leg become contracted. Dr Lind found by dissection that this was owing

to an extravasation of blood between the muscular fibres and in the interstices of the muscles. A swelling in almost every case occurred in the arm, this was hard and incompressible.

Pains in the breast were frequently observed, they were increased by coughing and exercise of any kind. The extreme oppression & Dyspnea that occurred in one case, caused it to be mistaken for Angerthorax.

In two cases ulceration took place, one was in an habitual drunkard, who formerly had sore legs. They ~~formerly~~^{now} broke out with foul and very fungous ulcers. The other had the

the preceding autumn received an injury on his knee - They were treated successfully by mild applications and the general remedies for surgery

The pulse did not in any case show tension, it was in general small weak and slow —

The cure was almost entirely trusted ~~trusted~~ to a vegetable diet, with lemons; this never failed in a few days of relieving the patient - The swelled and indurated legs were not immediately cured; fomentions with flannel were applied with advantage

Raw potatoes grated down and made palatable with spices and vinegar were of eminent service

the preceding autumn, however, in
digging on his land, they were
not so carefully kept, and of
his stock and the general
then for himself.
The fishes did not in any way
show themselves, it was in general
all well and as of old.
The water was almost entirely
transparent to a depth of
about 100 feet, the water being
in a few days of returning the
surface. The water was not
the deep blue but more
greenish, but with the flowers
were affected with a
brown color greater or less and
more palatable with a
more or less of a

Particular attention should be paid to exercise, Scorbatic patients are so averse to this, that authority must be interposed to enforce this salutary prescription - The berries in Lapland that cure this disease, are said to lose half their virtue unless collected by the patient himself

As several remedies were tried before the complaint was known, I shall first mention the result of a few of them - Bleet - manifestly did harm - Local Bloodletting with the scarificator was attended with no better success, it was succeeded by swelling and ulceration that was difficult to heal - Blisters did serious mischief, they always failed

in relieving the pain for which they were applied, and the sores which they left behind were with difficulty prevented from running into Gangrene.

Lime juice ~~which~~ was at first procured in bottles as imported from the West Indies. This was found far inferior to the fresh limes.

Barb, elix Vit, and the Nitric acid had no impression on the disease - Dr Lind relates a case that occurred under the use of Elix. Vit. His experience convinces him that it will not prevent or cure Scurvy.

